1   **AUTOMATED CONTENT PUBLISHING**

2   <u>FIELD OF THE INVENTION</u>

3   The invention relates to a method of operating a computer system as well as to a

4   computer system comprising at least one content provider which is coupled to a portal

5   which may be coupled to a user.

6   <u>BACKGROUND OF THE INVENTION</u>

7   If a new content provider wants to offer a new content to a portal or if a known content

8   provider wants to offer a new feed or channel to the portal, then it is necessary that the

9   portal examines the new content provider or the new feed or channel. In known computer

10   systems, this examination is performed manually, i.e. by an administrator who is a real

11   person and who checks the new content provider or the new feed or channel and who then

12   accepts or rejects the new content provider or the new feed or channel. Apparently, this

13   procedure requires a lot of manual effort.

14   <u>SUMMARY OF THE INVENTION</u>

15   It is therefore an aspect of the invention to provide a method of operating the computer

16   system which requires less effort for allowing the new content provider to offer the new

17   content to the portal and for allowing the known content provider to offer the new feed or

18   channel to the portal.

1   The invention provides an automated method of registering a new content provider. As

2   well, a new feed or channel of a known content provider may be registered automatically.

3   For that purpose, the portal comprises a database for storing credentials of registered

4   content providers. The portal then compares the credentials of the new content provider

5   with the credentials of the registered content providers. If the new content provider is

6   found in the database, the new content provider is allowed to offer new content to the

7   portal.

8   BRIEF DESCRIPTION OF THE DRAWINGS:

9   These and other objects, features, and advantages of the present invention will become

10   apparent upon further consideration of the following detailed description of the invention

11   when read in conjunction with the following drawing figures, in which:

12   Fig. 1 shows an example computer system in accordance with the invention; and

13   Fig. 2 shows an example of a schematic block diagram of a method of operating the

14   computer system of Fig. 1,in accordance with the invention.

15   DETAILED DESCRIPTION OF THE INVENTION:

16   The present invention provides methods, systems and apparatus for operating a computer

17   system requiring less effort in allowing a new content provider to offer content to a

18   portal, and/or for allowing a known content provider to offer a new feed or channel to the

19   portal with old and/or new content.

1   The invention also provides an automated method of registering the new content provide,

2   and provides for a new feed or channel of a known content provider to be registered

3   manually and/or automatically. In an example embodiment, the portal includes a database

4   for storing credentials of registered content providers. The portal then compares the

5   credentials of the new content provider with the credentials of the registered content

6   providers. If the new content provider is found in the database, the new content provider

7   is allowed to offer new content to the portal. If there is no match, the portal examines the

8   credentials of the new content provider. This evaluation may be performed fully

9   automatically by an intelligent program with a rule database. Alternatively or

10   additionally, the evaluation may be done semi- automatically by an administrator who is a

11   real person. Depending on the evaluation, the portal accepts or rejects the new content

12   provider. A similar procedure may be performed for a new feed or channel of a known

13   content provider.

14   A similar procedure may be performed with respect to the new content which is offered

15   by the new content provider or on the new feed or channel. In this situation, the new

16   content may be evaluated fully automatically by an intelligent program again or

17   semi-automatically by an administrator.

18   Furthermore, it is possible that the portal learns the preferences of the user from what the

19   user selects and declines. Depending on these preferences, it is possible to notify the new

20   content or the new feed or channel automatically to the user.

21   Figure 1 shows a computer system 10 comprising a number of content providers 11, 12,

22   13 and a portal 14. The content providers 11, 12, 13 provide any kind of content like

23   news, whether, stock quotes and so on. The portal 14 collects this content from the

24   content providers 11, 12, 13 in order to forward the collected content to a requesting user.

25   The content providers 11, 12, 13 and the portal 14 are located on server computers which

1   run under the Hypertext Transmission Protocol (HTTP) so that the content providers 11,

2   12, 13 and the portal 14 may therefore connect to each other via the Internet.

3   It is now assumed that the content provider 13 is a new content source for the portal 14,

4   i.e. is not yet known to the portal 14. In order to offer this new content source to the users,

5   the portal 14 must first register the new content provider 13 and must then check the

6   content provided by the new content provider 13.

7   Figure 2 shows a method for registering the new content provider 13 and for checking the

8   content provided by the new content provider 13. For that purpose, the new content

9   provider 13 is shown in Figure 2.

10   The new content provider 13 may find the portal 14 e.g. with the help of the Universal

11   Description, Discovery and Integration (UDDI) interface which the portal 14 provides in

12   the Internet. From this UDDI interface, the new content provider 13 may collect all

13   necessary information on how to contact the portal 14.

14   Then, the new content provider 13 contacts a content provider registration 15 at the portal

15   14 and sends its credentials to the portal 14. The credentials of the new content provider

16   13 are compared to the credentials of the registered content providers which are stored in

17   a database 16 in the portal 14. As the new content provider 13 is not known to the portal

18   14, no corresponding credentials can be found. Therefore, an administrator 17 has to

19   approve the new content provider 13.

20   The aforementioned administrator 17 can be a real person who checks the credentials of

21   the new content provider 13 and then accepts or rejects the new content provider 13. As

22   well, the administrator 17 can be an intelligent program with a rule database which

23   automatically checks the credentials of the new content provider 13 and establishes a

1 decision whether to accept or reject the new content provider 13. Of course, the last-

2 mentioned fully automated version can additionally be accomplished by a real person.

3 If the new content provider 13 is approved by the administrator 17, the credentials of the

4 new content provider 13 are stored in the database 16 of the registered content providers

5 credentials. Furthermore, an authentication and authorization 18 is given to the new

6 content provider 13 to provide its content to the portal 14.   .

7 It should be added that the subsequently described procedure is also applicable if the

8 content provider 13 would not be new, but would be known to the portal 14.

9 With the help of a publish service 19 of the portal 14, the content provider 13 sends

10 information to the portal 14 concerning the new content which the content provider 13

11 can offer and which therefore can be published by the portal 14. This information is

12 stored in a portal content queue 20 in the portal 14.

13 The administrator 17 then checks the information stored in the portal content queue 20

14 and accepts or rejects the new content offered by the content provider13. This evaluation

15 of the new content is performed within a content management 21 in the portal 14. The

16 accepted new content of the content provider 13 is then stored in a portal content

17 catalogue 22. Furthermore, a message of the decision of the administrator 17 is sent to the

18 content provider 13. It is noted that the administrator 17 can be a real person in a

19 semi-automated version and/or an intelligent program in a fully automated version.

20 The entire available content of the portal 14 is then assembled into a portal configuration

21 23. A user 24 may then select any desired content from this portal configuration 23. The

22 selected content is requested by the user 24 from the content provider 13 which sends the

23 requested content with the help of a portlet 25 as a portal aggregation 26 to the user 24.

24 The user 24 may then view the requested portal aggregation 26 on his/her computer

1   system. The communication between the user 24 and the portal 14 may be performed via

2   the Internet so that a known browser is sufficient for the user 24 to view the content

3   received from the portal 14.

4   Alternatively or additionally, a notification service may be established within the portal

5   14. For that purpose, a database 27 may be built up which learns the preferences of the

6   user 24 from what the user 24 selects and declines. If the new content of the content

7   provider 13 is added to the portal configuration 23, a message may be sent to the user 24

8   if this new content matches with the preferences of the user 24. The user 24 may then

9   access the new content without having to find and select the new content in the portal

10   configuration 23.

11   The same method may be used for introducing a new feed or channel of a known content

12   provider 11, 12, 13 into the portal content catalogue 23 and the portal configuration 24.

13   For this purpose, the database 16 may comprise further credentials concerning the feeds

14   or channels of the content providers 11, 12, 13. The credentials of any new feed or

15   channel is then added to the database 16.

16   The present invention can be realized in hardware, software, or a combination of

17   hardware and software. A visualization tool according to the present invention can be

18   realized in a centralized fashion in one computer system, or in a distributed fashion where

19   different elements are spread across several interconnected computer systems. Any kind

20   of computer system - or other apparatus adapted for carrying out the methods and/or

21   functions described herein - is suitable. A typical combination of hardware and software

22   could be a general purpose computer system with a computer program that, when being

23   loaded and executed, controls the computer system such that it carries out the methods

24   described herein. The present invention can also be embedded in a computer program

25   product, which comprises all the features enabling the implementation of the methods

1 described herein, and which - when loaded in a computer system - is able to carry out

2 these methods.

3 Computer program means or computer program in the present context include any

4 expression, in any language, code or notation, of a set of instructions intended to cause a

5 system having an information processing capability to perform a particular function either

6 directly or after conversion to another language, code or notation, and/or reproduction in

7 a different material form.

8 Thus the invention includes an article of manufacture which comprises a computer usable

9 medium having computer readable program code means embodied therein for causing a

10 function described above. The computer readable program code means in the article of

11 manufacture comprises computer readable program code means for causing a computer to

12 effect the steps of a method of this invention. Similarly, the present invention may be

13 implemented as a computer program product comprising a computer usable medium

14 having computer readable program code means embodied therein for causing a a function

15 described above. The computer readable program code means in the computer program

16 product comprising computer readable program code means for causing a computer to

17 effect one or more functions of this invention. Furthermore, the present invention may be

18 implemented as a program storage device readable by machine, tangibly embodying a

19 program of instructions executable by the machine to perform method steps for causing

20 one or more functions of this invention.

21 It is noted that the foregoing has outlined some of the more pertinent objects and

22 embodiments of the present invention. This invention may be used for many applications.

23 Thus, although the description is made for particular arrangements and methods, the

24 intent and concept of the invention is suitable and applicable to other arrangements and

25 applications. It will be clear to those skilled in the art that modifications to the disclosed

26 embodiments can be effected without departing from the spirit and scope of the invention.

1   The described embodiments ought to be construed to be merely illustrative of some of

2   the more prominent features and applications of the invention. Other beneficial results

3   can be realized by applying the disclosed invention in a different manner or modifying the

4   invention in ways known to those familiar with the art.